

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Cancelled)

2. (Cancelled)

3. (Currently Amended) A method for producing an enzyme cellobiase in the presence of glycosylation inhibitor 2-deoxy-D-glucose from cultures of preparation from a growing culture of Termitomyces clypeatus, said preparation containing high concentration of enzyme increased cellobiase activity in comparison to a control culture, grown in absence of glycosylation inhibitor 2-deoxy-D-glucose, the said method comprising the steps of:

(a) inoculating a mycelial culture of the Termitomyces clypeatus into sterilized medium containing carbon and nitrogen sources, inorganic salts, organic nutrients and glycosylation inhibitor 2-deoxy-D-glucose in the range of from about 10 µg/ml to about 2 mg/ml of a glycosylation inhibitor at a pH of between about 3 to 8;

(b) growing the mycelial culture at temperatures between 20-37°C under shaking in aerobic conditions; and

(c) separating the culture medium from the mycelia to obtain produce the enzyme preparation containing cellobiase activity, said enzyme having an increased enzymatic activity in the range of that is increased at least about 1.15-fold units/ml to about 97 units/ml -fold in the presence of glycosylation inhibitor 2-deoxy-D-glucose in comparison to cellobiase activity produced by the same organism under the same conditions in absence of the glycosylation inhibitor 2-deoxy-D-glucose.

4. (Cancelled)

5. (Cancelled)

6. (Previously Presented) The method of claim 3 wherein the medium contains assimilable carbon and nitrogen sources, inorganic salts and organic nutrients.

7. (Currently Amended) The method as claimed in claim 3, of claim 6 wherein the assimilable carbon sources of step (a) used are carbohydrates, agrowastes, TCA cycle acids, amino acids, or D-glucosamine wherein the carbohydrates are selected from the group consisting of cellobiose, mannose, fructose, xylose, arabinose, starch, dextrin, cellulose, cotton, and xylan; wherein the agrowastes are selected from the group consisting of bagasse powder, rice-straw powder, wheat bran, corn cob powder, and corn powder; wherein the TCA cycle acids are selected from the group consisting of succinate, fumarate, and maleate; and wherein the amino acids are selected from the group consisting of aspartate, glutamate, serine, histidine, and alanine.

8. (Currently Amended) The method of claim 3 wherein the glycosylation inhibitors is of steps (a) and (c) are selected from the group consisting of tunicamycin, 1-deoxynojirimycin, 2-deoxy-D-glucose and D-glucono-lactone.

9. (Currently Amended) The method as claimed in claim 3, of claim 6 wherein the assimilable nitrogen source in step (a) is selected from the group consisting of ammonium chloride, ammonium nitrate, ammonium dihydrogen orthophosphate, and potassium nitrate.

10. (Currently Amended) The method as claimed in of claim 3, wherein the sterilized medium in step (a) further comprises an organic nutrient selected from the group consisting of malt extract, yeast extract, potato extract, peptone, soya-peptone, bactopeptone, and corn steep liquor.

11. (Currently Amended) The method as claimed in of claim 3, wherein the sterilized medium further comprises a detergent selected from the group consisting of Tween-20, Tween-80, and Tween-100.

12. (Currently Amended) The method as claimed in claim 3, wherein in the presence of 2-deoxy-D-glucose also enhances activity of other enzymes like endoglucanase and cellobiohydrolase, the enzyme preparation containing high cellobiase activity also contains high endo-glucanase activity and high cellobiohydrolase activity.

13. (Currently Amended) The method as claimed in of claim 8, wherein enhanced enzyme activity of cellobiase is about 2.23 units/ml in presence of about 0.05mg/ml of 2-deoxy-D-glucose, the enzyme preparation containing high cellobiase activity is an enzyme preparation containing cellobiase activity that is at least about 2.2 units/ml, and wherein the sterilized medium contains about 0.05 mg/ml 2-deoxy-D-glucose.

14. (Currently Amended) The method as claimed in of claim 13, wherein enhanced enzyme activity of cellobiase is about 50.09 units/ml in presence of about 1 mg/ml of 2-deoxy-D-glucose, the enzyme preparation containing high cellobiase activity is an enzyme preparation having cellobiase activity that is at least about 50 units/ml, wherein the sterilized medium contains about 1 mg/ml 2-deoxy-D-glucose.

15. (Currently Amended) The method as claimed in of claim 14, wherein enhanced enzyme activity of cellobiase is the enzyme preparation containing high cellobiase activity is an enzyme preparation having cellobiase activity that is at least about 90 units/ml, wherein the sterilized medium contains about in presence of about 300 µg/ml 2-deoxy-D-glucose.

16. (Currently Amended) The method as claimed in of claim 14, wherein enhanced enzyme activity of cellobiase is the enzyme preparation containing high cellobiase activity is an enzyme preparation having cellobiase activity that is at least

about 140 units/ml in presence of, wherein the sterilized medium contains about 1 mg/ml 2-deoxy-D-glucose and further contains about 500 µg/ml of 2-deoxy-D-glucose. mannose.

17. (Currently Amended) The method as claimed in of claim 8, wherein enhanced enzyme activity of cellobiase is the enzyme preparation containing high cellobiase activity is an enzyme preparation having cellobiase activity that is at least about 6.18 units/ml in presence of, wherein the sterilized medium contains at least about 2 mg/ml of glucono-lactone.

18. (Currently Amended) The method as claimed in of claim 8, wherein enhanced enzyme activity of cellobiase is the enzyme preparation containing high cellobiase activity is an enzyme preparation having cellobiase activity that is at least about 1.4 units/ml in presence of, wherein the sterilized medium contains at least about 80 µM of 1-deoxynojirimycin.